



NORTHERN HARDWOOD NOTES

Thinning Sprout Clumps

How do you deal with stump sprouts in second-growth hardwood stands? Although thinning them takes special effort to avoid causing decay, stump sprouts are the only way to regenerate certain species such as basswood. Generally, you should thin them *early* and preferably when potential crop stems are 3 inches d.b.h. or less. But if you delay thinning until they are pole-size, leave those with vigorous co-dominant crowns, and those joined to the stump at the lowest point.

Basswood

Even though basswood produces the heaviest and most frequent seed crops among the hardwoods, trees rarely originate from seedlings under natural conditions. So in managing basswood you have to depend almost entirely on stump sprouts. Fortunately, basswood is the most prolific stump sprouter among the hardwoods. Basswood sprouts from dormant buds on stumps of all sizes but more abundantly from stumps of saw log-size trees. Few sprouts on suppressed trees develop fully.

Leave two or at most three sprouts to a clump, as widely spaced as possible, to assure good growth and form. You can thin basswood at any age without decay being transmitted, provided that the union is no higher than "normal" stump height for a tree of that diameter.

In thinning clumps, if you have to choose between a saw log-size tree and a pulpwood-size tree with good growth potential, remove the larger tree. Few mills now accept basswood for pulpwood, so let the pulpwood-size tree grow (see figures on next page).

Forty-three-year development of a basswood sprout clump

1939

A basswood sprout clump, age 12 years, with three numbered trees. (Tree 184 is just behind the tree to the right of 183).

D.b.h.

Tree 183-3.5 inches

Tree 184-3.2 inches

Tree 185-2.9 inches



1977

The same clump at age 50. Note two rotten stumps left from trees showing in top photo.

D.b.h.

Tree 183-1 0.8 inches

Tree 184-9.2 inches

Tree 185-1 0.9 inches



1982

The same clump at age 55 showing no decay in tree 185 (left) or 183 (right) and sprouts already showing from the cutting of tree 184 in 1980.

D.b.h.

Tree 183-1 1.8 inches

Tree 185-1 2.1 inches.



Red Maple

Red maple stumps about 10 inches in diameter and stumps of formerly fast-growing trees sprout the most prolifically. Most sprouts have decay, which originates more from dead limbs than from old stumps. Thin red maple early during the sapling or small-pole stage. Leave only one or two sprouts, making sure that they originate at or below the root collar.

Sugar Maple

Sprouting in sugar maple declines rapidly as stump diameter increases, and there are far fewer sprouts per stump than in red maple. Sprouting originates from the root collar so there is little decay. Thin the same as red maple.

White Ash

White ash produces some sprouts. It grows fast but is easily suppressed as a sapling or a pole. Thin sprouts to two or three stems.

Yellow Birch

Yellow birch rarely sprouts, regardless of stump size.

Red Oak

Sprout clumps of red oak are good choices for precommercial thinning because the sprouts grow rapidly after thinning and are potentially long-lived. Thin as early as 4 years and leave just one sprout. Experience shows that stems thinned this early grow faster than stems in unthinned clumps.

References

Johnson, P. S., Godman R. M. Precommercial thinning of oak, basswood, and red maple sprout clumps. In: Silviculture of established stands in north central forests, SAF Region 5 technical conference; 1983 September 14-16; Duluth, MN. Madison, WI: University of Wisconsin; 1983: 124-142.

Stroempl, G. Thinning clumps of northern hardwood stump sprouts to produce high quality timber. For. Res. Inf. Pap. 104. ON: Ontario Ministry of Natural Resources; 1983.27 p.

Richard M. Godman